BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

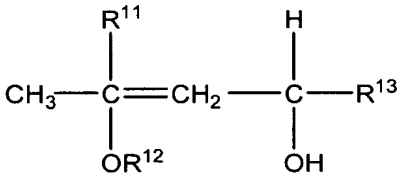
Listing of Claims:

I claim: ~~WHAT ARE CLAIMED ARE:~~

1. (Currently Amended) A ballpoint pen oil-based ink composition, comprising

a coloring material,

an oil-based solvent, said oil-based solvent comprising one or more compounds having the following formula:



where R^{11} and R^{13} each is independently H or CH_3, R^{12} is CH_3,

a polyvinyl butyral resin,

at least one phosphoric acid ester having an acid value of 90 to 600, and

at least one ~~weakly~~ weak cationic component selected from the group consisting of:

a) ~~imidazoline—type~~ imidazoline activator,

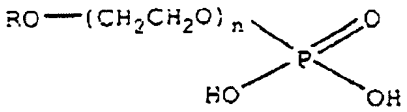
b) polyoxyethylene alkylamine,

c) polyoxyethylene alkylamide, and

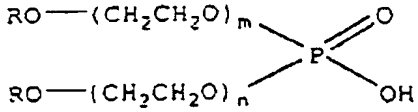
d) alkylalkanolamide.

2. (Currently Amended) The ballpoint pen oil—based ink composition according to claim 1, wherein said phosphoric acid ester comprises a phosphoric acid monoester, a phosphoric acid diester, a phosphoric triester or a mixture thereof, said phosphoric acid monoester, phosphoric acid diester and triester being represented by the following formula:

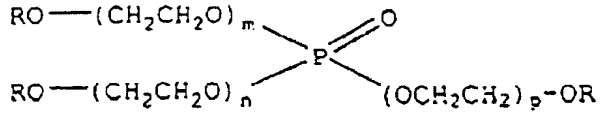
Monoester



Diester



Triester

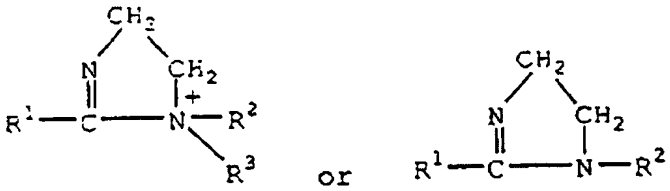


wherein

n, m, and p[[:]] each have an average addition molar number of [[(]]n, m, and p≥0[[,]] ~~preferably 10≥n, m≥0, p≥0)~~ of ethylene oxide, and

R[[:]] is ~~each~~ independently an alkyl group or alkylphenol group having from 3 to 30[[,]] ~~preferably from 10 to 20,~~ carbon atoms.

3. (Currently Amended) The ballpoint pen oil—based ink composition according to claim 1, wherein said ~~imidazoline type~~ imidazoline activator has a structure represented by the following formula or an imidazoline derivative:



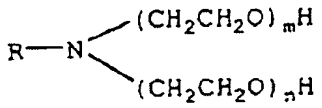
wherein

R^1[[:]] is H or an alkyl or alkylphenol group having from 1 to 30~~, preferably from 10 to 20,~~ carbon atoms;

R^2[[:]] is a hydroxylalkyl group having from 1 to 30~~, preferably from 10 to 20,~~ carbon atoms; and

R^3[[:]] is a CH_2COO^-/carboxylate group.

4. (Currently Amended) The ballpoint pen oil—based ink composition according to claim 1, wherein said polyoxyethylene alkylamine has a structure represented by the following formula:

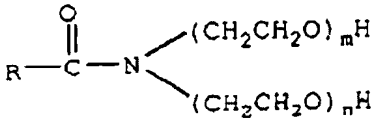


wherein

R[[:]] is H or an alkyl or alkylphenol group having from 1 to 30 carbon atoms; and

n and m≥1~~, preferably n, m≥2, more preferably n, m≥5~~.

5. (Currently Amended) The ballpoint pen oil-based ink composition according to claim 1, wherein said polyoxyethylene alkylamide has a structure represented by the following formula:

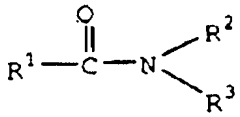


wherein

R[[:]] is H or an alkyl or alkylphenol group having from 1 to 30 carbon atoms; and

n[[,]] and m≥1~~, preferably n, m≥2, more preferably n, m≥4~~.

6. (Currently Amended) The ballpoint pen oil-based ink composition according to claim 1, wherein said alkylalkanolamide has a structure represented by the following formula:



wherein

R^1[[:]] is an alkyl or alkylphenol group having from 1 to 30 carbon atoms~~, preferably from 10 to 20 carbon atoms~~;

R^2[[:]] is H or an alkyl or hydroxyalkyl group having from 1 to 30 carbon atoms~~, preferably from 10 to 20 carbon atoms~~; and

R^3[[:]] is H or an alkyl or hydroxylalkyl group having from 1 to 30 carbon atoms~~, preferably from 10 to 20 carbon atoms~~.

7. (Original) The ballpoint pen oil—based ink composition according to claim 1, wherein said phosphoric acid ester is contained in an amount of 0.1 to 15.0% by weight of the composition.

8. (Currently Amended) The ballpoint pen oil—based ink composition according to claim 1, wherein said ~~weakly acid~~ weak cationic component is contained in an amount of 0.1 to 15.0% by weight of the composition.

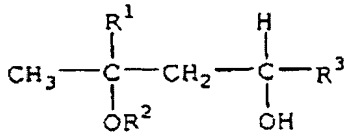
9. (Original) The ballpoint pen oil—based ink composition according to claim 1, wherein said oil-based solvent comprises as a main solvent, at least one solvent selected from the group consisting of alcohols, polyhydric alcohols and glycol ethers each having a vapor pressure at 25°C of 0.001 mmHg or more.

10. (Original) The ballpoint pen oil-based ink composition according to claim 1, wherein said oil-based solvent comprises as a main solvent, at least one solvent selected from the group consisting of alcohols, polyhydric alcohols and glycol ethers each having a vapor pressure at 25°C of 0.01 mmHg or more.

11. (Original) The ballpoint pen oil-based ink composition according to claim 1, further comprising a resin in an amount of 1 to 30% by weight of the composition.

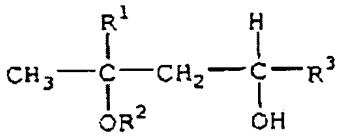
12. (Original) The ballpoint pen oil-based ink composition according to claim 1, wherein said oil-based solvent comprises a solvent having a chemical structure represented by $C_nH_{2n+1}OC_3H_6OH$ where n is an integer of 1 to 3 as a main solvent and an auxiliary solvent having a vapor pressure lower than that of said main solvent and having a viscosity of 1 to 50 mPa•s, said ink composition further comprises a resin soluble in at least one of said main and auxiliary solvents, said ink composition having a viscosity of 800 to 10,000 mPa•s at 25°C.

13. (Currently Amended) The ballpoint pen oil-based ink composition according to claim 1, wherein said oil—based solvent comprises a propylene glycol monoethyl ether ~~and one or more compounds having the following chemical formula:~~



~~where R^1, R^2 and R^3 each is independently H or CH_3;~~ said ink composition further comprises a resin soluble in said mixed solvent, said ink composition having a viscosity of 800 to 6,000 mPa•s at 25°C.

14. (Currently Amended) The ballpoint pen oil—based ink composition according to claim 1, wherein ~~said oil-based solvent comprises one or more compounds having the following chemical formula:~~

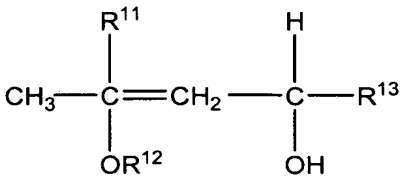


~~where R^1, R^2 and R^3 each is independently H or CH_3;~~ said ink composition further comprises a resin soluble in said solvent, said ink composition having a viscosity of 700 to 8,000 mPa•s at 25°C.

15. (Currently Amended) A ballpoint pen comprising an ink holder, ~~the~~ a ballpoint pen oil—based ink composition ~~according to claim 1~~ in said ink holder, and an ballpoint pen tip provided at an end of the ink holder, wherein the ballpoint pen oil—based ink composition comprises

a coloring material,

an oil-based solvent, said oil-based solvent comprising one or more compounds having the following formula:



where R^{11} and R^{13} each is independently H or CH_3, R^{12} is CH_3,

a polyvinyl butyral resin,

at least one phosphoric acid ester having an acid value of 90 to 600, and

at least one weak cationic component selected from the group consisting of:

a) imidazoline activator,

b) polyoxyethylene alkylamine,

c) polyoxyethylene alkylamide, and

d) alkylalkanolamide.

16. (Original) The ballpoint pen according to claim 15, further comprising an ink follower provided in said ink holder at another end of the ink composition opposite to the ballpoint pen tip.

17. (Original) The ballpoint pen according to claim 15, wherein said ballpoint pen tip comprises a ceramic micro ball.

18. (New) The ballpoint pen oil—based ink composition according to claim 2, wherein n, m, and p are $10 \geq n$, $m \geq 0$, $p \geq 0$ and R is 10 to 20 carbon atoms.

19. (New) The ballpoint pen oil—based ink composition according to claim 3, wherein

R^1 of the imidazoline derivative is from 10 to 20 carbon atoms; and

R^2 of the imidazoline derivative is from 10 to 20 carbon atoms.

20. (New) The ballpoint pen oil—based ink composition according to claim 4, wherein n and m ≥ 2.

21. (New) The ballpoint pen oil—based ink composition according to claim 4, wherein n and m ≥ 5.

22. (New) The ballpoint pen oil—based ink composition according to claim 5, wherein n and m ≥ 2.

23. (New) The ballpoint pen oil—based ink composition according to claim 5, wherein n and m ≥ 4.

24. (New) The ballpoint pen oil—based ink composition according to claim 6, wherein

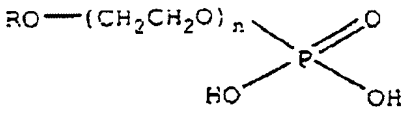
R^1 is from 10 to 20 carbon atoms;

R^2 is from 10 to 20 carbon atoms; and

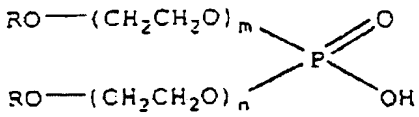
R^3 is from 10 to 20 carbon atoms.

25. (New) The ballpoint pen according to claim 15, wherein said phosphoric acid ester comprises a phosphoric acid monoester, a phosphoric acid diester, a phosphoric triester or a mixture thereof, said phosphoric acid monoester, phosphoric acid diester and triester being represented by the following formula:

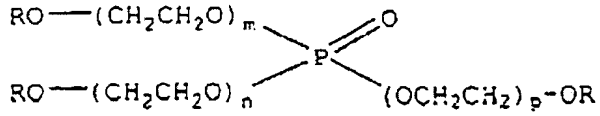
Monoester



Diester



Triester

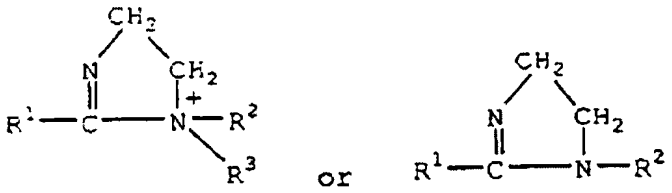


wherein

n, m, and p each have an average addition molar number of n, m, and p≥0 of ethylene oxide, and

R is independently an alkyl group or alkylphenol group having from 3 to 30 carbon atoms.

26. (New) The ballpoint pen according to claim 15, wherein said imidazoline activator has a structure represented by the following formula or an imidazoline derivative:



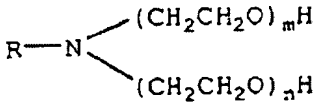
wherein

R^1 is H or an alkyl or alkylphenol group having from 1 to 30 carbon atoms;

R^2 is a hydroxylalkyl group having from 1 to 30 carbon atoms; and

R^3 is a CH_2COO^-/carboxylate group.

27. (New) The ballpoint pen according to claim 15, wherein said polyoxyethylene alkylamine has a structure represented by the following formula:

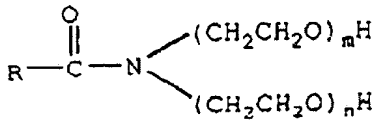


wherein

R is H or an alkyl or alkylphenol group having from 1 to 30 carbon atoms; and

n and m≥1.

28. (New) The ballpoint pen according to claim 15, wherein said polyoxyethylene alkylamide has a structure represented by the following formula:

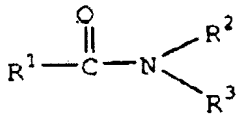


wherein

R is H or an alkyl or alkylphenol group having from 1 to 30 carbon atoms; and

n and m≥1.

29. (New) The ballpoint pen according to claim 15, wherein said alkylalkanolamide has a structure represented by the following formula:



wherein

R^1 is an alkyl or alkylphenol group having from 1 to 30 carbon atoms;

R^2 is H or an alkyl or hydroxyalkyl group having from 1 to 30 carbon atoms; and

R^3 is H or an alkyl or hydroxylalkyl group having from 1 to 30 carbon atoms.

30. (New) The ballpoint pen according to claim 15, wherein said phosphoric acid ester is contained in an amount of 0.1 to 15.0% by weight of the composition.

31. (New) The ballpoint pen according to claim 15, wherein said weak cationic component is contained in an amount of 0.1 to 15.0% by weight of the composition.

32. (New) The ballpoint according to claim 15, wherein said oil-based solvent comprises as a main solvent, at least one solvent selected from the group consisting of alcohols, polyhydric alcohols and glycol ethers each having a vapor pressure at 25°C of 0.001 mmHg or more.

33. (New) The ballpoint according to claim 15, wherein said oil-based solvent comprises as a main solvent, at least one solvent selected from the group consisting of alcohols, polyhydric alcohols and glycol ethers each having a vapor pressure at 25°C of 0.01 mmHg or more.

34. (New) The ballpoint pen according to claim 15, further comprising a resin in an amount of 1 to 30% by weight of the composition.

35. (New) The ballpoint pen according to claim 15, wherein said oil-based solvent comprises a solvent having a chemical structure represented by $C_nH_{2n+1}OC_3H_6OH$ where n is an integer of 1 to 3 as a main solvent and an auxiliary solvent having a vapor pressure lower than that of said main solvent and having a viscosity of 1 to 50 mPa•s, said ink composition further comprises a resin soluble in at least one of said main and auxiliary solvents, said ink composition having a viscosity of 800 to 10,000 mPa•s at 25°C.

36. (New) The ballpoint according to claim 15, wherein said oil—based solvent comprises a propylene glycol monoethyl ether said ink composition further comprises a resin soluble in said mixed solvent, said ink composition having a viscosity of 800 to 6,000 mPa•s at 25°C.

37. (New) The ballpoint pen according to claim 15, wherein said ink composition further comprises a resin soluble in said solvent, said ink composition having a viscosity of 700 to 8,000 mPa•s at 25°C.

38. (New) The ballpoint pen according to claim 26, wherein n, m, and p are $10 \geq n$, $m \geq 0$, $p \geq 0$ and R is 10 to 20 carbon atoms.

39. (New) The ballpoint pen according to claim 27, wherein

R^1 of the imidazoline derivative is from 10 to 20 carbon atoms; and
R^2 of the imidazoline derivative is from 10 to 20 carbon atoms.

40. (New) The ballpoint pen according to claim 28, wherein n and m ≥ 2.

41. (New) The ballpoint pen according to claim 28, wherein n and m ≥ 5.

42. (New) The ballpoint pen according to claim 29, wherein n and m ≥ 2.

43. (New) The ballpoint pen according to claim 29, wherein n and m ≥ 4.

44. (New) The ballpoint pen according to claim 30, wherein

R^1 is from 10 to 20 carbon atoms;
R^2 is from 10 to 20 carbon atoms; and
R^3 is from 10 to 20 carbon atoms.